Remarks

The Applicants have amended Claims 5, 6, 8 and 10 in their respective preambles so that they are all consistent with one another. Entry into the official file and consideration is respectfully requested.

Claim 10 has further been amended to change "comprising" to "consisting of." Entry of that change into the official file is also respectfully requested.

New Claim 11 has been added. It depends from Claim 10 and specifies that the amount of Cr is 16.1 to 18.0%. Support may be found in the Applicants' original specification at Table 1, columns 8 and 9. Steels 1 and 4 contain the new 16.1 and 18.0 end points which constitutes the new range as compared to the 11 to 30% range of Claim 10. Entry of new Claim 11 into the official file and consideration on the merits is respectfully requested.

Claim 5, 6, 8 and 10 stand rejected under 35 U.S.C. §103 as being obvious over CH '459. The Applicants note with appreciation the Examiner's detailed comments hypothetically applying CH '459 to the rejected claims. The Applicants nonetheless respectfully submit that CH '459 is inapplicable for the reasons set forth below.

First, CH '459 as set forth in the English translation from page 1, line 5 from the bottom to page 2, line 21, relates to high strength heat resistant steel to be used to make blades for turbines and compressors and the like. In addition, a hot rolled steel sheet is subjected to heat treatment so that the steel sheet displays a high resistance to tempering and good long-term creep stability. In other words, CH '459 does not conduct cold rolling or annealing as recited in the rejected claims. Thus, the Applicants respectfully submit that CH '459 in applicable on this basis alone.

Nonetheless, Claim 10 now employs that transitional phrase "consisting of" in place of "comprising." Use of this transitional phrase thus excludes tantalum which is present in the steels of

CH '459. Moreover, not only does CH '459 disclose steels containing tantalum, but CH '459 characterizes the presence of tantalum as "required." Specifically, the Applicants invite the Examiner's attention to page 6 of the English translation of CH '459 in the third full paragraph which states in part:

> At least 0.03% niobium-tantalum is required to achieve any advantage either in respect of grain size control or conversion with the nitrogen present.

In other words, CH '459 teaches those skilled in the art that not only is tantalum present, but that it is required to achieve certain benefits sought by the CH '459 inventors. In fact, the Applicants respectfully submit that CH '459 provides even further compelling teachings with respect to tantalum. This may be found four lines from the bottom of page 5 of the English translation which states:

> The constituents carbon, chromium, nitrogen and niobium-tantalum are of crucial significance in every sense in the inventive steel.

The Applicants respectfully submit that CH '459 characterizes tantalum, among other compositional elements, as crucial. This is sharply contrasted to Claim 10 which excludes tantalum by virtue of the use of "consisting of." The Applicants therefore respectfully submit that CH '459 is inapplicable for this reason as well.

Moreover, in view of the amount of niobium-tantalum of CH '459 being: Nb+Ta: 0.03 to 0.75%, Claim 10 not only eliminates Ta, but the range of Nb disclosed in CH '459 becomes 0.03% or more. This is also outside the content of Nb: 0.029% or less of Claim 10. Withdrawal of the rejection based on CH '459 is requested for this reason as well.

When the composition of new Claim 11 is compared with that of CH '459, according to the description set forth from line 11 on page 15 to page 16 of the English translation, the composition contains 10 to 16% chromium and the metal structure is a martensite phase. Also, as set forth in the English translation of CH '459 on page 2 from lines 5 to 2 from the bottom, carbon of 0.60 to 1.20% is necessary to be included to obtain a martensite structure in a composition range (type 440) of CR of 16 to 18%.

On the other hand, as is obvious from the Applicants' title, Claim 11 (as well as Claim 10) relates to ferritic stainless steel. Ferritic stainless steel represented by Type 430 steel, which is used for kitchenware and the like, is generally subjected, after hot rolling, to cold rolling and annealing. The Examples in the Applicants' specification show the effect of formability and ridging property of Claim 11, which becomes extremely conspicuous with 16 to 18% Cr steel. In sharp contrast, to ensure that a martensite structure is obtained in CH '459, a high content of carbon amounting to 0.60% or more is necessary, as is set out in the English translation on page 2 from lines 5 to 2 from the bottom.

Claim 10 specifies a carbon content of 0.02 to 0.06% for the purpose of establishing a ferrite structure. Therefore, the object is completely different from CH '459 which is directed to high carbon high strength steel. The Applicants respectfully submit that Claim 10 is further allowable for the reasons set forth above with respect to the ferritic versus martensitic sheets as well as the carbon content.

To clarify the Cr differences, Claim 11 specifies Cr at 16.1 to 18.0%. This is neither disclosed nor taught by CH '459. Thus, Claim 11 is allowable over CH '459.

In light of the foregoing, the Applicants respectfully submit that the entire application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,

T. Daniel Christenbury
Reg. No. 31,750
Attorney for Applicants

TDC/rb
(215) 656-3381